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EXAMINER

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OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON VA 22202

WILLETT, S

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/035,995**

Applicant(s)

**Saito et al.**

Examiner

**Stephan Willett**

Group Art Unit

**2756**



☒ Responsive to communication(s) filed on Mar 6, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-90 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-90 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-90 are rejected under 35 U.S.C. 103(a) as being unpatentable in view of Keshav et al. with patent Number 5,623,605.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).
4. Claim 1 describes *an establishing unit for establishing a channel in the second physical network for transmitting the information data* which is disclosed as "Fig. 6 illustrates a client connection routine which may be used by a processing system to obtain a virtual circuit with a desired remote connection-oriented server program" (col. 10, lines 26-29 in the Keshav et al. patent). Claim 1 describes *a reserving unit for reserving a communication path for transferring the information data transmitted through said channel to another data transfer control device*

*belonging to the first physical network and/or the receiving node* which is disclosed as “after receiving the acknowledgment from the connection manager, the routine then waits, for a subsequent message from the connection manager that a connection with the requested remote server program has been established” (col. 10, lines 49-53 in the Keshav et al. patent). Claim 1 describes *a commanding unit for commanding the transmitting node to transmit the information data through said channel, by using a protocol depending on the second physical network* which is disclosed as “within the processing system, the exemplary application program, which may be a connectionless server or client program, communicates with a connection service routines library and communications may occur by interprocess communication within the processing unit, or by a connection between two suitably programmed circuits or devices within the processing system” (col. 5, lines 58-64 in the Keshav et al. patent). The Keshav et al. patent does not explicitly disclose *using a protocol dependent on a second physical network*. However, the Keshav et al. patent teaches “the invention is described below with reference to these connectionless and connection-oriented networks, respectively, which is not meant to be a limitation on the types of networks which may suitably utilize the present invention” (col. 4 and 5, lines 66-67 and 1-3, respectively, in the Keshav et al. patent). It would have been obvious to one of ordinary skill in the art to incorporate the use of a network protocol dependent on the interfaced network in the Keshav et al. patent since the system interface two different physical network systems. To incorporate protocols other than ATM and IP would insure that other network protocols are supported by the system. The motivation for using a protocol dependent on the physical network results in the stated objective to interface two different physical networks.

5. Claim 2 describes *a the receiving unit transmits a control message commanding a*

*network connection device which connects the second physical network and a third physical network* which is disclosed as “the corresponding remote server program may be located on a device [third physical network] linked to the ATM network or the Internet” (col. 10, lines 33-34 in the Keshav et al. patent). Claim 2 describes *to register a correspondence between the channel in the second physical network and a header/channel information depending on the third physical network* which is disclosed as “the received message indicating the connection has been established may contain the corresponding VCI value for the connection and the VCI value is used by the client application program in substantially identical manner as that described above with respect to the routine in Figure 5” (col. 10, lines 56-61 in the Keshav et al. patent).

6. Claim 3 describes *wherein the reserving unit transmits a control message containing an address information for said another data transfer control device and/or the receiving node and at least one of a header information to be attached to the information data and an information regarding a channel through which the information data is to be transferred, to said another data transfer control device and/or the receiving node* which is disclosed as “the method may be used by any connectionless server routine operating on a device connected to the Internet, such as the application program operating on the processing system 100” (col. 8, lines 13-16 in the Keshav et al. patent).

7. Claim 4 describes *an interface unit for connecting the data transfer control device to a third physical network or the first physical network; and a transmission unit for transmitting the information data received through said channel in the second physical network to the third physical network or the first physical network, onto a channel indicated by said control message, or after attaching the header information contained in said control message* which is disclosed as

“the ATM protocol stack interface may perform data transfer of ATM-formatted frames between application program and a device on the ATM network via the ATM network interface, or a device on the Internet protocol stack interface and the stack interfaces and the encapsulator-decapsulator may operate as a gateway processing system or ATM-enabled host on the Internet for transferring data between devices on the networks” (col. 6, lines 49-58 in the Keshav et al. patent).

8. Regarding claim 5, the Keshav et al. patent discloses the *apparatus of claim 3*. The Keshav et al. patent does not explicitly disclose *a conversion unit for converting a data format of data received through said channel, from a first data format depending on the second physical network to a second data format depending on the third physical network or the first physical network and/or an upper logical network of the third physical network or the first physical network*. However, Official Notice is taken (see MPEP 2144.03(a)) that converting between two different data formats is well known in the art to insure that two different applications are able to share data and to communicate. It would have been obvious to one of ordinary skill in the art at the time of the application’s invention to convert data formats to obtain the advantages of communicating with different software applications. By the above rational, claim 5 is rejected.

9. Claim 6 describes *an encoding/decoding unit for encoding/decoding data received through said channel* which is disclosed as “the generated IP packet header is then appended [encoded] to the generated intermediate data packet to form the IP packet” (col. 12, lines 43-44 in the Keshav et al. patent).

10. Claim 7 describes *wherein the establishing unit establishes said channel in a form of a broadcast type channel* which is disclosed as “a contemplated use of the interprocess

communication and inter-network data transfer methods[broadcasting] and systems of the present invention is to provide communication and data transfer between devices on the Internet and the ATM network” (col. 5, lines 62-66 in the Keshav et al. patent).

11. Regarding claims 9 and 10, the Keshav et al. patent discloses the *apparatus of claim 1*. The Keshav et al. patent does not explicitly disclose *a collecting unit for collecting attribute information of transmitting and/or receiving nodes connected with the second physical network; and a notifying unit for notifying said attribute information to said another data transfer control device and/or receiving node and a receiving unit for receiving a notice regarding attribute information of transmitting and/or receiving nodes connected with the first physical network; and a memory unit for storing said attribute information*. However, Official Notice is taken (see MPEP 2144.03(a)) that collecting information regarding network nodes, notification of network topology and storing such network node attribute information is well known in the art to insure that two different networks are able to communicate. It would have been obvious to one of ordinary skill in the art at the time of the application’s invention to determine the network topology to obtain the advantages of communicating with different network protocols and systems. By the above rational, claims 9 and 10 are rejected.

12. Claim 15 describes *wherein said control message also contains an information regarding a communication resource required in reserving the communication path* which is disclosed as “upon receipt of a request from a client program for the available” (col. 12, lines 43-44 in the Keshav et al. patent).

13. Claim 8 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

14. Claim 11 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.
15. Claim 12 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.
16. Claim 13 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.
17. Claim 14 contains similar limitations to those in Claim 7 and is therefore rejected by the same rational.
18. Claim 16 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.
19. Claim 17 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.
20. Claim 18 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.
21. Claim 19 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.
22. Claim 20 contains similar limitations to those in Claim 4 and is therefore rejected by the same rational.
23. Claim 21 contains similar limitations to those in Claims 2 and 4 and is therefore rejected by the same rational.
24. Claim 22 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.



25. Claim 23 contains similar limitations to those in Claim 7 and is therefore rejected by the same rational.
26. Claim 24 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.
27. Claim 25 contains similar limitations to those in Claim 10 and is therefore rejected by the same rational.
28. Claim 26 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.
29. Claim 27 contains similar limitations to those in Claim 4 and is therefore rejected by the same rational.
30. Claim 28 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.
31. Claim 29 describes *a second establishing unit for establishing a communication path between the data transfer control device and the first physical network or a terminating node belonging to an upper logical network of the first physical network* which is disclosed as “application programs A and B[second establishing unit], shown in Fig. 4, may be existing application routines which have been modified to transfer ATM-formatted frames and to incorporate communication connections with remote client or server programs” (col. 7, lines 12-17 in the Keshav et al. patent).
32. Claim 30 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.
33. Claim 31 contains similar limitations to those in Claim 5 and is therefore rejected by the

same rational.

34. Claim 32 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

35. Claim 33 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.

36. Claim 34 contains similar limitations to those in Claim 29 and is therefore rejected by the same rational.

37. Claim 35 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

38. Claim 36 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.

39. Claim 37 contains similar limitations to those in Claim 6 and is therefore rejected by the same rational.

40. Claim 38 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.

41. Claim 39 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

42. Claim 40 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

43. Claim 41 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

44. Claim 42 contains similar limitations to those in Claim 3 and is therefore rejected by the

same rational.

45. Claim 43 contains similar limitations to those in Claim 4 and is therefore rejected by the same rational.

46. Claim 44 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.

47. Claim 45 contains similar limitations to those in Claim 6 and is therefore rejected by the same rational.

48. Claim 46 contains similar limitations to those in Claim 7 and is therefore rejected by the same rational.

49. Claim 47 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

50. Claim 48 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.

51. Claim 49 contains similar limitations to those in Claim 10 and is therefore rejected by the same rational.

52. Claim 50 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

53. Claim 51 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

54. Claim 52 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

55. Claim 53 contains similar limitations to those in Claim 7 and is therefore rejected by the

same rational.

56. Claim 54 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

57. Claim 55 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.

58. Claim 56 contains similar limitations to those in Claim 10 and is therefore rejected by the same rational.

59. Claim 57 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

60. Claim 58 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

61. Claim 59 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

62. Claim 60 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

63. Claim 61 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

64. Claim 62 contains similar limitations to those in Claim 7 and is therefore rejected by the same rational.

65. Claim 63 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.

66. Claim 64 contains similar limitations to those in Claim 10 and is therefore rejected by the

same rational.

67. Claim 65 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

68. Claim 66 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

69. Claim 67 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.

70. Claim 68 contains similar limitations to those in Claim 6 and is therefore rejected by the same rational.

71. Claim 69 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

72. Claim 70 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.

73. Claim 71 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

74. Claim 72 contains similar limitations to those in Claim 5 and is therefore rejected by the same rational.

75. Claim 73 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

76. Claim 74 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

77. Claim 75 contains similar limitations to those in Claim 5 and is therefore rejected by the

same rational.

78. Claim 76 contains similar limitations to those in Claim 6 and is therefore rejected by the same rational.

79. Claim 77 contains similar limitations to those in Claim 9 and is therefore rejected by the same rational.

80. Claim 78 contains similar limitations to those in Claim 3 and is therefore rejected by the same rational.

81. Claim 79 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

82. Claim 80 contains similar limitations to those in Claim 2 and is therefore rejected by the same rational.

83. Claim 81 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

84. Claim 82 describes *a processing unit for carrying out processing in an upper layer of transport layer with respect to the third communication device* which is disclosed as “the ATM protocol stack interface arranges data into an ATM-formatted frame and transmits it to the encapsulator-decapsulator which encapsulates the data packet within an IP packet” (col. 7, lines 49-53 in the Keshav et al. patent).

85. Claim 83 contains similar limitations to those in Claim 4 and is therefore rejected by the same rational.

86. Claim 84 describes *a second receiving unit for temporarily receiving the specified data flow of the network layer by using the communication resource, where a destination network*

*layer address of the data flow is a network address to be used for receiving of the data flow which is temporarily assigned to the communication device* which is disclosed as “if the IP format packet indicates the packet contains an encapsulated ATM-formatted frame, as in this example, then IP packet is sent to the encapsulator-decapsulator[second receiving unit] for decapsulation” (col. 12, lines 54-58 in the Keshav et al. patent).

87. Claim 85 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

88. Claim 86 contains similar limitations to those in Claim 4 and is therefore rejected by the same rational.

89. Claim 87 contains similar limitations to those in Claim 1 and is therefore rejected by the same rational.

90. Claim 88 contains similar limitations to those in Claim 82 and is therefore rejected by the same rational.

91. Claim 89 contains similar limitations to those in Claim 4 and is therefore rejected by the same rational.

92. Claim 90 contains similar limitations to those in Claim 84 and is therefore rejected by the same rational.

### ***Conclusion***

93. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is disclosed in the Notice of References Cited. Particularly, Ogawa et al. with Patent Number 5,608,874 and Rangarajan et al. with Patent Number 5,845,081 are made of record to

substantiate the Official Notice taken with regard using different network protocols and collecting network topology information.

94. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephan Willett whose telephone number is (703) 308-5230. The examiner can normally be reached Monday through Friday from 8:00 AM to 6:00 PM.

95. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Asta, can be reached on (703) 305-3817. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-9731.

96. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9605.

sfw

September 2, 1999



FRANK J. ASTA  
SUPERVISORY PATENT EXAMINER  
GROUP 2700